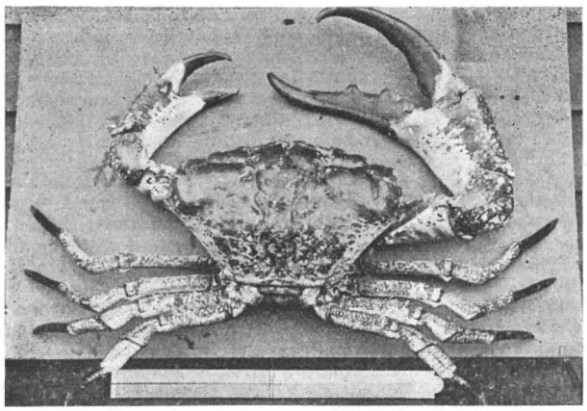
The belittling process, though unjustifiable, was understandable enough in those old days of controversy. To-day it seems ra her uncharitable. C. SIMMONDS.

Thurlow Hill, West Dulwich, September 17.

A Large Tasmanian Crab.

I AM sending you a photograph of a large crab (*Psilocranium gigas*), caught in the Tasmanian waters during the present month. The crab weighed 30 lbs. It is one of the largest that has been caught in these waters. We have several specimens in the Tasmanian Museum weighing from 16 to 22 lbs. They



are generally caught by the fishermen in very deep water, from fifteen to thirty fathoms, while fishing for the fish known as the Tasmanian Trumpeter (*Latris hecateia*).

I shall be glad to know whether readers of NATURE have ever known of a larger *Psilocranium gigas* having been caught.

ALEX. MORTON.

Tasmanian Museum and Art Gallery, July 30.

Large Puff Balls.

HAVING seen in some papers lately notices of large puff balls, it may probably be of interest to record the measurements of one far exceeding in size any I ever heard of.

It was found by my daughter, Mrs. Pole-Carew, in a small park belonging to me near this place, where she is residing. I took careful measurements of it at the time it was found, of which I send you a copy.

It differed in no respect except size, either inside or out, from the ordinary smooth puff ball.

Measurements of a large Puff Ball found in Chipley Park, near Wellington, Somerset, June 12, 1900.

Horizontal circumference	57	inches
Vertical ditto, greatest	51	,,
,, ,, smallest	46	,,
Height	14	,,
Greatest width	18½	,,
Smallest ,, ...	17	,,
Weight	14 lb. 10 oz.	

W. A. SANFORD.

Nynehead Court, Wellington, Somerset, September 11.

"A Tour through Great Britain in 1727."

Is not the "Tour" queried by your reviewer (p. 417, column 2) that of Defoe, which has frequently been reprinted? and yet the first edition (1724–27) is still the best, in spite of re-editors and its extension from three vols. to four.

Ulverston. S. L. PETTY.

PROF. HENRY SIDGWICK.

THE death of Henry Sidgwick entails the removal of one of the most potent influences that have been felt in Cambridge for the last forty years. Only a brief allusion can be made here to the time and energy which he devoted to University affairs, and to the constant and generous aid given by him to departments handicapped by poverty. As one of the strongest leaders in University policy, his power depended on a practical insight and decision of view for which those who know him only through his writings would be unlikely to credit him.

He was born in 1838. His father, the Rev. William Sidgwick, was headmaster of the Skipton Grammar School. Having been at Rugby under Dr. Goulburn, he entered Trinity College in October 1855. In 1859 he took his degree as Senior Classic and 33rd Wrangler, was elected to a Trinity Fellowship, and soon afterwards appointed Lecturer in Classics and Assistant Tutor. His interest in literary criticism and in problems of practical ethics was indicated, at this early stage, by various minor writings, of which we may specially mention an article on "The Prophet of Culture" (*Macmillan's Magazine*, 1867), in which he made a very characteristic examination of Matthew Arnold's closing lecture at Oxford. In 1868 was founded a Society, called "The Free Christian Union," of which Sidgwick was vice-president. His famous essay on "The Ethics of Conformity and Subscription" (1870) was written at the Society's request. This period of his life culminated in 1869 in the determination to give up his Trinity Fellowship on the ground that he no longer believed in the explicit creed to which the holders of Fellowships were required to subscribe under the old system of "tests." This action of Sidgwick's and the similar acts of some of his friends and contemporaries were undoubtedly important forces in the promotion of the abolition of the tests. Not long after, Sidgwick was made Lecturer and Examiner in the Moral Sciences, and later, Prælector in Moral and Political Philosophy at Trinity. In 1881 he was elected to an Honorary Fellowship there, and in 1883 he succeeded Birks in the Knightbridge Professorship of Moral Philosophy, which he resigned at the beginning of his illness last June.

As a teacher, Sidgwick exerted a profound and enduring influence, largely due to the extraordinary patience and quick perception with which he recognised and criticised the efforts of his pupils at independent thought. He presented to them an ideal of conscientious thoroughness in the pursuit of speculative truth, which has impressed and inspired even those who have developed their thought in directions far removed from his own.

Sidgwick's most important work, "The Methods of Ethics," was published in 1874 (2nd ed., 1877; 3rd, 1884; 4th, 1890; 5th, 1893) Its purpose is unlike that of most other modern works in philosophy. Not aiming directly at the construction of an ethical system, it adopts rather the Socratic method of stimulating the plain man to examine his own principles, and by self-criticism to free them from vagueness, obscurity and inconsistency. By many readers the unimpassioned, elaborately reasoned, judiciously balanced criticism is found unprofitable. But its penetrating subtlety and breadth of view are characteristics which have been recognised by all who have come under its influence, and have won for it a place amongst the philosophical classics. In general spirit it carries on the tradition of English common-sense empiricism; and, while to Sidgwick all forms of transcendentalism were repellent, yet unlike many of his predecessors in English philosophy, his criticism of opposed schools of thought was always keen and thoroughly scholarly. A different side of Sidgwick's intellectual character is shown in his work on "Practical Ethics," a collection of essays and addresses (1898), in which his speculations are applied to the very definite solution of actual problems of conduct in modern life.

In the "Outlines of the History of Ethics for English Readers," Sidgwick has supplied a most useful guide to the study of the subject. In the "Principles of Political Economy" (1st ed., 1883; 2nd, 1887) and in "The Scope and Method of Economic Science" (1885), there is a return to the older English thought, but the subject is treated with an acuteness and originality specially characteristic of Sidgwick's intellect, which have given to these works real value as contributions to economic science. The third book of the principles contains the "Art of Political Economy," which, together with "The Elements of Politics" (1st ed., 1891; 2nd, 1897), shows the keen interest always felt by Sidgwick in political and social questions, and the practical sagacity with which he handles these problems. In politics, Sidgwick combined the freedom from prejudice of the Radical with the caution of the Conservative.

Perhaps the most important practical work with which the name of Sidgwick has been associated is in connection with the higher education of women. He was the virtual founder of Newnham College, through the scheme of lectures for women which he initiated in 1869, and the house of residence which he started and persuaded Miss Clough to take charge of in 1871. In 1880, Mrs. Sidgwick having consented to become vice-principal of the second Hall of the College just opened, they both came to live there for two years; and when, after Miss Clough's death in 1892, Mrs. Sidgwick became principal of the College, they made it their permanent home.

In 1882 Sidgwick accepted the presidency of the newly formed Society for Psychical Research, in the subject-matter of which he had been interested for many years. The spirit which has characterised the proceedings of the Society, and the success which it has achieved, have been largely due to the sobriety and wisdom of Sidgwick's constant counsel and control.

PROF. JAMES EDWARD KEELER.[1]

THE sudden death of Prof. James E. Keeler, director of the Lick Observatory, which occurred at San Francisco on August 12, removes one who stood at the very forefront of astrophysical research.

James Edward Keeler was born at La Salle, Illinois, on September 8, 1857. His qualifications for scientific work clearly showed themselves at the Johns Hopkins University, where he took an undergraduate course, and served as assistant to Prof. Hastings, with whom he observed the total solar eclipse of 1878 in Colorado.

Shortly after this he was appointed assistant at the Allegheny Observatory, where he had an important part in the long series of bolometric investigations carried on by Prof. Langley, then director of the Observatory. In July 1881 he was a member of Prof. Langley's well-known expedition to Mount Whitney, in Southern California, where an extensive region in the extreme infra-red of the solar spectrum was discovered with the bolometer. Later he studied for two years in Berlin and Heidelberg under Helmholtz and Quincke, and returned to the Allegheny Observatory, where he remained until appointed a member of the staff of the Lick Observatory. His work on Mount Hamilton commenced in 1885, and for some time he was the only astronomer at the Observatory, which was still in process of construction. In May 1891 he was elected professor of astrophysics in the Western University of Pennsylvania and director of the Allegheny Observatory.

Keeler's work at the Lick Observatory was continued in a most effective manner with the modest instrumental resources at Allegheny. With a full understanding of the art of making the most of his means, he took up photography for the first time, made himself thoroughly familiar with photographic processes, and then, with the aid of a spectrograph whose general design has been followed in the construction of the great modern spectrographs at Mt. Hamilton, Potsdam, Pulkowa and Williams Bay, he obtained the photographs of the spectra of red stars which excited so much interest at the dedication of the Yerkes Observatory. He also made an admirable series of drawings of Mars, which was published in the *Memoirs* of the Royal Astronomical Society.

In the spring of 1898 Keeler had practically decided to accept a position on the staff of the Yerkes Observatory, and would have done so had he not just then been appointed director of the Lick Observatory. His recent work on Mt. Hamilton has not been confined to the direction of the affairs of a great observatory. The remarkable success of his experiments with the Crossley reflector, of which a full account is fortunately preserved in the June number of the *Astrophysical Journal*, has impressed every one who has seen the wonderful photographs of nebulæ and star clusters made with this instrument.

Of Keeler's other contributions to science two in particular deserve present mention: his determination with the Lick telescope of the motion in the line of sight of the planetary nebulæ, and his demonstration of the meteoric constitution of Saturn's rings. The memoir which describes the first of these investigations already ranks as a classic of astrophysical literature; while the spectroscopic demonstration of the meteoric constitution of Saturn's rings is perhaps the most striking of the many effective applications which have been made of Doppler's fruitful principle.

Much more might be said of Keeler's work, but this should suffice to indicate its lasting value. It is a satisfaction to add that its merit has been widely appreciated, as has recently been evidenced by the award of the Draper and Rumford medals. He was president of the Astronomical Society of the Pacific and a councillor of the Astronomical and Astrophysical Society of America. He was elected an Associate of the Royal Astronomical Society in 1898 and a member of the National Academy of Sciences at its last meeting. His kindly and genial manner, combined with unusual tact and rare judgment, drew to him many friends, who will long mourn his loss.

[1] Abridged from an obituary notice contributed to *Science* of September 7 by Prof. George E. Hale.

NOTES.

THE annual meeting of the Iron and Steel Institute was opened at Paris on Tuesday with an address by the president, Sir W. Roberts-Austen, K.C.B., F.R.S. It was announced that Mr. Andrew Carnegie has offered to the Institute the sum of 6500*l.* for the purpose of founding a medal and scholarship to be awarded for any piece of work that may be done in any works or University, and to be open to either sex.

IT is stated by the Paris correspondent of the *Times* that M. Yersin, to whom the Academy of Moral Sciences recently awarded a prize of 15,000 francs for philanthropic acts, has devoted the sum to his anti-plague serum establishment at Nha-trang.

THE *British Medical Journal* announces that the prize of 4000 marks voted by the Berlin Congress of Tuberculosis for the best popular work on tuberculosis as a social scourge, and the means of preventing its ravages, has been awarded to Dr. S. A. Knopf, of New York. The work will be published by the German Central Committee.

A TABLE of standard sizes of conductors for electric supply mains has been drawn up by the Cable Makers' Association and sent to electrical engineers. The table shows the nominal